COMPACT 40/25

HOT FOIL-PRINTING SYSTEMS

OPERATING INSTRUCTIONS

Important Notes

Operating instructions

Description	Version
Compact 40/25	M00101101EN0313

The operating manual is a translation of the original operating instructions.

Applicability

The present operating instructions apply to the device with the following article number.

Device name

Article Number	Description
0.0000.03900	Compact 40/25

Using this manual

- First read the Chapter on "Safety Information" before you begin work with the device.
- The operating manual enables safe working on and with the device. It is essential that you comply with all safety instructions contained therein.
- Read the complete operating manual before installing and commissioning the device.
- The operating manual is a part of the device. It has to be stored so that every person that works on and with the device has access to it at all times. The manual must be complete and in an easily readable condition.
- When the device is passed on, you have to enclose the operating manual.
- If the operating manual is lost, please ask for a replacement. Information on the current version of the operating manual may be found on our website www.allen.de.
- The information provided in these Operating Instructions relate to the devices described under "Applicability".
- For additional technical information on the device, please refer to the service manual.

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Table of Contents

1   Product Identification

1.1   Characteristic data

Device name: Compact 40/25		
Article Number		Device / Part
0.0000.03900		Compact 40/25
0.0000.06850		Power Pack
0.0000.02300		Electronic Module

Print area	[mm]	max. 38 x 25
Print speed	[prints/min]	up to 400
Dwell time	[sec]	0.03 – 0.5
Ribbon feeder	[mm]	2 - 25
Print temperature switchable range	[°C]	130 - 160
Foil size	[mm x m]	40 x 122
Foil Run Out warning		standard
Max. width of substrate		no restriction

1.2   Compliant Use

1.2.1 Ambient conditions

Device name: Compact 40/25		
Ambient temperature, operation	[°C]	5-40
Relative humidity, operation (non-condensing)	[%]	20-85
Protection class	[IP]	40
Ambient temperature, transport and storage	[°C]	-10-70
Relative humidity, transport and storage (non-condensing)	[%]	20-85

1.2.2 Designated use

- The Printing systems can be operated in intermittent mode.
- The Printing systems are intended for commercial or industrial use.
- The Printing systems may not be used outdoors or in a non-explosion-safe environment (Ex-area).
- Only materials suitable for the printing method may be used for printing.
- The Printing System must be permanently installed into a frame designed for this purpose (machine frame/machinery holder).
- No modifications to the Printing System are allowed.
- The applicable safety requirements, the ambient conditions and technical data specified in these Instructions must be observed at all times.
- Operation of the Printing System may only proceed with the specified accessories/consumable material/replacement parts. Only use original accessories and original replacement parts.

Operation/use of the Printing System other than in compliance with the conditions established by the manufacturer may result in hazards to personnel and/or property damage.

Potential misuse of the device:

- The coder should not be operated with this guard removed.
- The coder should not be operated with the magazine removed.

1.2.3 Qualification of personnel

Operation and set-up:
Operation and set-up of the device may only be performed by sufficiently qualified and trained personnel that have been authorized by operator to perform these tasks.

Installation, cleaning and maintenance:
Installation, cleaning and maintenance of the device may only be performed by fully qualified and trained technical personnel.

Maintenance:
Maintenance of the device may only be performed by the manufacturer's technical personnel or by fully trained and qualified technical personnel.

1.3 Technical data

This Section contains information on the mechanical, electrical and pneumatic properties of the Printing System and its accessories.

1.3.1 Mechanical data

Device name: Compact 40/25		Power Pack	Electronic Module	Printhead
Equipment height	[mm]	81	78	201
Equipment width	[mm]	130	190	135
Equipment depth	[mm]	122	80	124
Weight	[kg]	1,9	0,6	4.5
Noise Emission	[dB (A)]	---	---	74

1.3.2 Electrical data

Device name: Compact 40/25		
Rated voltage	[V_{AC}]	220-240 or 110
Mains frequency	[Hz]	50 at 220-240 Vac
		60 at 110 Vac
Power consumption	[A]	1A (at 220-240 Vac)
		1,5A (at 110 Vac)

1.3.3 Pneumatic data

The unit requires a normal industry supply of clean dry air. The air supply requirement is:

Device name Compact 40/25		
Air supply	[bar]	4/8 bar at up to 25.2 Liters / min
		(31.5cc/cycle, 0.9cfm @ 800/min)

1.4   Identification of the device

Type plate

The nameplate attached to the device contains the following data:

①	Article number	⑤	Electrical data: Voltage, frequency, power
②	Device type	⑥	Manufacturer
③	Serial number	⑦	CE-identifier
④	Year built		

1.5   Compliance Information

1.5.1 CE-conformity

NOTE

CE-conformity
The product's CE conformance is certified by attachment of the CE symbol to the name plate and by the conformity statement included with the product. A sample of the declaration is found in the Appendix to these Operating Instructions; see "*EC-Compliance Statement*".

The device meets the requirements of the following European EC-Guidelines:

- Machine guideline **2006/42/EG**
- EMC guideline **2004/108/EG**
- The low-voltage guideline 2006/95/EC was adhered to in regards to its protection objectives

1.5.2 EMC Compliance Statements

European Union (EU) Electromagnetic Compatibility Directive Compliance Statement

This product is in conformity with the protection requirements of EU Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

1.5.3 RoHS / WEEE – compliance

RoHS

The product complies with the relevant provisions of the RoHS Directive for the European Union.

WEEE Directive Statement for the European Union

WEEE-Reg.-Nr. DE	84410135

In common with all Electronic and Electrical products the product should not be disposed of in household waste. Alternative arrangements may apply in other jurisdictions.
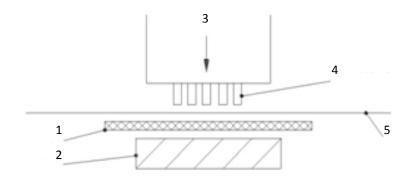
2   Product Specifications

In this chapter you will find information on the deliverable items and on the furnishings of the device.

2.1   General Description

The Hot Foil Printing Process

Hot Foil printing is a process in which a heated type is pressed firmly against the item to be printed with stamping foil in between, for a set time. To produce a high quality, no-smudging, permanent print the three variable factors; pressure, temperature and time, must be accurately controlled.

1	ITEM BEING PRINTED
2	BACKING PAD
3	PRESSURE
4	HEATED TYPE
5	STAMPING FOIL

2.2   Safety Requirements

NOTE

Please always follow the safety instructions.
See Chapter "

Functional Description

2.2.1 Electrical / Pneumatic Connections
Power Supply Connections – (Art.-No. 0.0000.06850)

Safety Information".

2.3   Deliverable Items

NOTE

Check the deliverable items for completeness and condition.
After receipt of the shipment, please check immediately to see whether all items listed on the delivery ticket are included and are undamaged. The manufacturer does not accept liability for deficiencies that have been claimed subsequently. Complain against:
- Transport damages directly to the shipping service.
- Deficiencies and/or incompleteness immediately to the manufacturer or your distributor.

The following components belong to the standard deliverable items for the device

Position	Count	Article number	Specification
001	1	0.0000.03900	Compact 40/25
002	1	0.0000.06850	Power Pack
003	1	0.0000.02300	Electronic Module
004	1	3.0000.08564	Air Service Unit

Position 001 Article Number 0.0000.03900 "Compact 40/25" includes the following items:

005	1	0.0000.02450	Magazine
006	1	0.0000.04684	Print head Compact
007	1	100419	Complementary Set Compact

Position 007 Article Number 100419 "Complementary Set Compact" includes the following items:

008	1	0.0000.01016	Washer
009	1,6m	0.0000.02017	White Air Pipe 5-3
010	1,6m	0.0000.02030	Red Air Pipe 5-3
011	2	0.0000.08727	Air-fitting Reducer 60mm-5mm
012	1	3.0000.46018	Spacer
013	1	3.0000.46019	Spacer
014	1	3.0000.46020	Spacer
015	1	3.0000.46023	Adjustable Hand Lever M8 x 83mm
016	1	A.1533.80200	Hot Foil, Type 200, Black, 153m x 38mm
017	1	-------------------	CD with operating instructions

2.4   Description of device

2.4.1 Leading Particulars

Power Supplies

The unit requires a single phase supply which must be connected to the emergency stop circuit of the host machine. The power supply unit, which should be isolated before making the change, incorporates a simple plug-in link to select for use with the mains of either:

- **220-240 Vac 50Hz**   **or**   **110Vac 60Hz**

Fuses

There are 4 replaceable fuses which are mounted on the printed circuit board in the power supply unit:

- **FS1**   **315 mA**
- **FS2**   **1.6 A**
- **FS3**   **1.6 A**
- **FS4**   **1A**   **(220-240V)**
                     1.5A   **(110v)**

Air Supply

The unit requires a normal industry supply of clean dry air. The air supply requirement is:
- **4/8 bar at up to 25.2 Liters / min (31.5cc/cycle, 0.9cfm @ 800/min)**

Operating Temperatures

The unit can be switched, before or during operation, between two temperature ranges to suit the application and current operating conditions. The temperature can be set

- **Between 130 and 160 Degrees C.**

Range of Typeholders

To allow rapid changes of print, and to allow its use in the widest range of applications, the Compact 40/25 Coder has been designed to accept interchangeable typeholders. These can be supplied as a blank, for machining by the end user, or ready machined to suit four main categories:

- **Fixed row and universal** *(for use with cast type)*

- **T-slot** *(for use with T-Slot type, engraved brass or steel)*

- **Zinco** *(for etched zinc plates 5mm thick)*

- **Rotary Flickwheel** *(wheels to allow easy changing of date, price or numbering)*

2.4.2 Physical Description

Coder

The coder unit comprises a heated block, mounted to the rod of a pneumatic cylinder which, in turn is supported by a machined frame. This contains the cylinder, the foil indexing mechanism and a printed control and connection board.

Power and control signals are connected via a lead. Air to the solenoid valve and the exhaust from the cylinder, via the valve, are connected to push in fittings.

The operating mechanism is fully enclosed, with the exception of a rotating shaft which provides motive power to index the foil in the magazine. Foil index depends on the rotation of this shaft and an adjustment knob, to control the index, is provided on top of the coder.

Magazine

The foil magazine fits into spigots provided on the coder body and is retained by a simple mechanical latch.

The magazine provides a take-up roller, driven from a rubber drive roller by an endless belt. The drive roller contains a one-way clutch and is turned by the rotating shaft on the coder body.

Foil is pulled by the drive roller via guide pins, from a feed on spool, the rotation of which is controlled by a friction belt to stop overrun of the foil.

Sprung tension rollers are provided immediately after the feed on spool and between the drive roller and tale up roller.

Electronic Module

The electronic module is provided with a mounting bracket which allows its fitting in a position convenient with the user. The unit provides control, indication and warning functions.

Air Service Unit
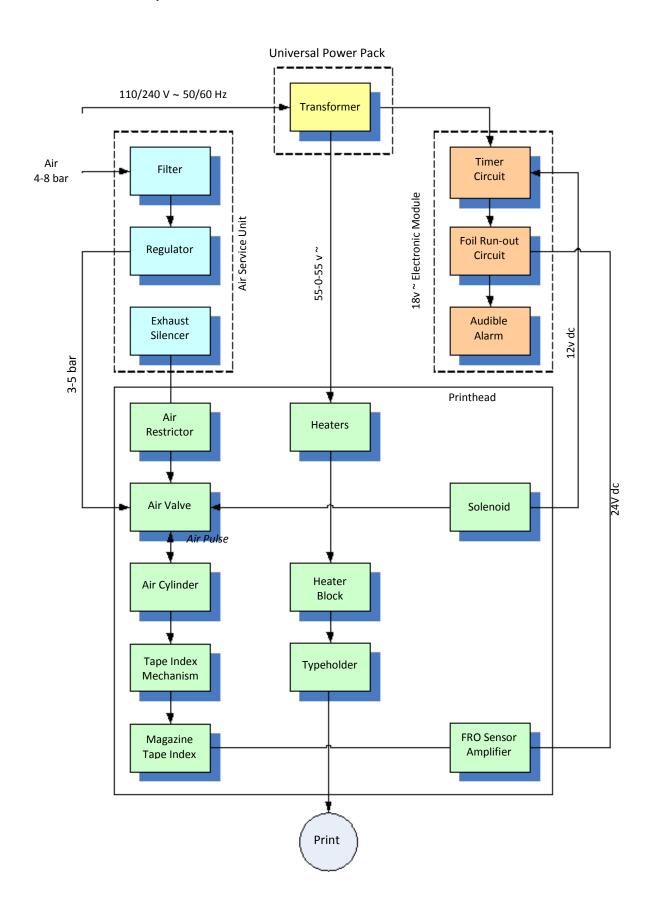
The air service unit incorporates a pressure regulator and water separation bowl, pressure gauge, air distribution manifold and air exhaust silencer. The water separation bowl is fitted with a manual drain valve.

Power pack

The power pack is a fully enclosed unit containing power transformer, fuses and connection blocks to distribute the power and control signals to and from the electronic module and parent machine.

2.4.3 Functional Description

Universal Power Pack

110/240 V ~ 50/60 Hz

Transformer

Air
4-8 bar

Filter

Regulator

Exhaust
Silencer

Air Service Unit

3-5 bar

55-0-55 v ~

18v ~ Electronic Module

Timer
Circuit

Foil Run-out
Circuit

Audible
Alarm

12v dc

Printhead

Air
Restrictor

Heaters

Air Valve

Solenoid

Air Pulse

Air Cylinder

Heater
Block

Tape Index
Mechanism

Typeholder

Magazine
Tape Index

FRO Sensor
Amplifier

24V dc

Print

2.4.4 Electrical / Pneumatic Connections
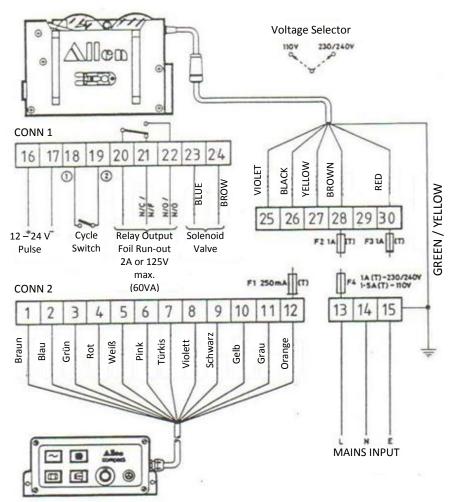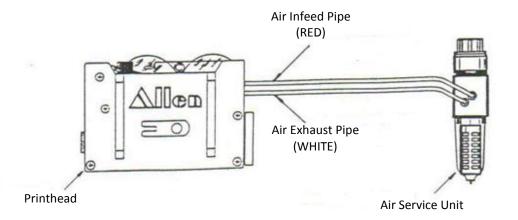**Power Supply Connections – (Art.-No. 0.0000.06850)**

To start print cycle connect 12 – 24 V pulse signal to 16 & 17 on CONN 1 or connect cycle switch to 18 & 19 on CONN 1 (N/O)

Pneumatic Connections

3   Safety Information

This Chapter contains information on the configuration and relevance of the safety information presented in these operating instructions, and also information on possible hazards which may occur even for compliant usage of the device.

3.1   Configuration of the safety instructions

⚠️ **SIGNAL WORD**

Type and source of hazard

Explanation of the hazard and information on possible consequences of non-compliance

▪ Activities/prohibited actions to help prevent accidents.

	The pictogram denotes the type of hazard		
	The safety sign ⚠️ before the signal word indicates a possibility of personal injury		
	The **signal word** denotes the severity of the hazard		
	SIGNAL WORD	**Consequences when hazard occurs**	**Probability of occurrence**
	HAZARD	Severe physical injury or death (irreversible)	imminent
	WARNING	Severe physical injury or death (irreversible)	possible
	CAUTION	Slight/minor physical injury (reversible)	possible
	ATTENTION	Property damage to machinery and/or to nearby assets	possible
	The reference text describes: ▪ type and source of hazard, ▪ the possible consequences of disregarding the safety instruction, ▪ measures or restraints to prevent the hazard.		

3.2 Used pictograms

Pictogram	Meaning
⚠️	Warning of a general hazard
STOP	Warning of possible property damages
📖	Before performance, observe the corresponding information in the operating manual
ℹ️	General note

3.3 Hazards during compliant use

⚠️ **CAUTION**

Potential hazard caused by incorrect accessories and spare parts!

The use of accessories and spare parts that are not recommended by the manufacturer may compromise safety, functionality and efficiency of the device. Any liability and warranty for any damages caused by not recommended accessories and spare parts or non-intended use is excluded by the manufacturer.

- Thus use manufacturer recommended accessories and spare parts exclusively.

3.4 Hazardous Zones

⚠️ **WARNING**

Skin burns due to high temperature of type holder and heater block

The heater block and type holder operate at a temperature high enough to cause skin burns if touched.

- Take care to avoid direct contact when removing or inserting a type holder from the heater block.
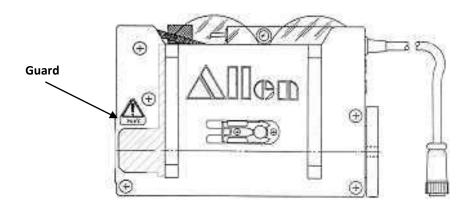
⚠ **WARNING**

Injury caused due to fingers being trapped and/or crushed

A guard is fixed to the magazine plate (see inset 'a') to prevent injury being caused due to fingers being trapped between the heater block and the magazine plate, and to prevent crushing between the type holder and the magazine plate.

- The coder should not be operated with this guard removed.
- The coder should not be operated with the magazine removed.
- See inset A

Inset A

Guard

⚠ **WARNING**

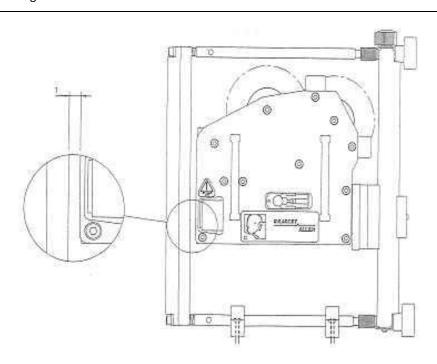**Possible finger trap hazard in space between coder and base of frame mounting plate**

The space between the coder and the base of the frame mounting plate (when adjusted to its maximum height), could present a possible finger trap hazard.

- Take care to avoid fingers being placed in the gap between the coder and the base of the frame mounting plate.
- See diagram below

4   Installation

In the following Chapter you will find information on installation of the device.

Allen Coding GmbH can provide mountings suitable to install the Compact 40/25 Coder onto a wide range of machines. In the following sections, the standard mounting frame is described. Contact Allen Coding GmbH for assistance or, alternatively, use the dimensions given for the standard mounting frame as a guide.

⚠ CAUTION

Potential hazard due to incorrect or non-compliant installation!

An incorrect or improper assembly of the device may impair safety, functionality and efficiency of the device.

- The installation of the device may be performed exclusively by qualified technical expert personnel.
- Follow the relevant instructions in the operating manual.
- The coder, electronic module and power pack must be earthed.
- Isolate the coder, electronic module and power pack before removing any covers.

4.1   Unpacking

⚠ CAUTION

Hazards due to defects or transport damage!

Transport damage to the device may result in unforeseeable hazards to personnel and/or property.

- When unpacking the device, check for any visible damage.
- Never ever connect a damaged device to the voltage supply.
- In case of transport damage, consult with the manufacturer or your distributor.

i   NOTE

Check the deliverable items for completeness and condition.
After receipt of the shipment, please check immediately to see whether all items listed on the delivery ticket are included and are undamaged. The manufacturer does not accept liability for deficiencies that have been claimed subsequently. File complaints with:
- Transport damages directly to the shipping service.
- Deficiencies and/or incompleteness immediately to the manufacturer or your distributor.

i   NOTE

Recycling of transport packing
The transport packaging may be stored for later recycling, e.g. transport or storage.

Step1: Open the transport packing.
Step 2: Check whether all items listed on the delivery slip are included and undamaged.
Step 3: Remove all components of the device carefully from the transport packing.
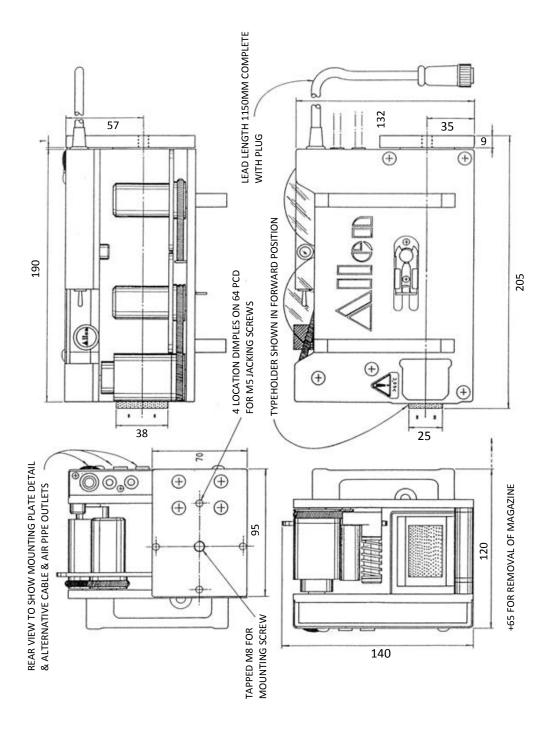
4.2   Installation

Space Requirements
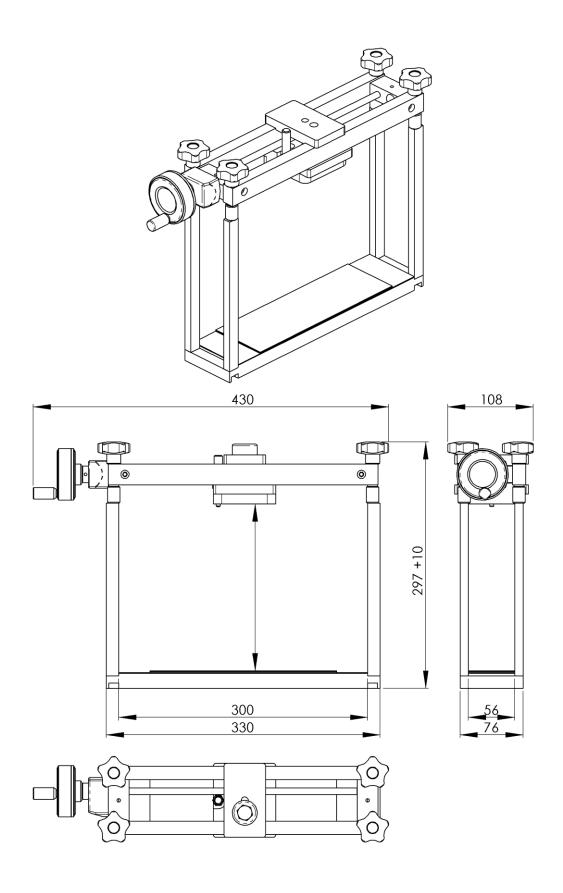
The illustrations of the various coder types show the installation dimensions of the coder unit. Particular attention should be taken to ensure there is necessary space available to allow for the removal of the magazine, and the tapped location hole to allow orientation of the type head to the printing position.

If not using a mounting frame supplied by Allen Coding GmbH then it is suggested that a convenient storage location is provided for the typeholder extractor handle. The handle has an M5 thread.

Frame

Coder Mounting and Adjustment Instructions

The following instructions are based on the use of a standard Allen Coding GmbH mounting frame. Any custom built installation adaptor should incorporate at least the alignment adjustments indicated.

- Arrange to install the mounting frame to provide the coder position to suit the application. For example, if printing directly onto cardboard boxes then it may be desired to allow the height of the printed code up the side of the box to be varied. Alternatively, if printing to label stock, the alignment of the printed text across the face of the label would be more important.

- Install the mounting frame securely.

- Mount the coder unit to the frame using an M8 screw. Ensure the screw length does not allow it to protrude beyond the thickness of the coder mounting. Align the coder head using the ball catches and indents provided on the mounting face.

- Adjust the coder position. Release the coder clamping handle by a quarter turn and move the coder position using the position adjustment knob. Re-tighten the coder clamping handle.

- Ensure that the chosen method of mounting will allow the face of the printing block to be parallel with the face of the printing medium. If necessary, release two or more of the adjustment locking knobs and turn the knurled adjustment nuts to the correct alignment. Tighten the adjustment locking knobs.

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i | **NOTE**

Replacement of the adjustment locking knobs
The adjustment locking knobs may be replaced using standard hexagon nuts to prevent unauthorized tampering

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- If necessary, insert the backing pad strip and ensure that it is aligned with the printhead. Note that the backing pad strip is used to provide a resilient surface to take small inaccuracies of the typeface and will not be necessary if the printing medium is sufficiently resilient.

Mounting Instructions Air Service Unit

The illustration shows the installation dimensions for the standard air service unit, which should be mounted vertically. Access must be provided to allow maintenance personnel to adjust the operating pressure and view the pressure gauge. Access is also required to visually check the liquid level in the sight glass and to drain the bowl using the manual drain valve.

⚠ | **CAUTION**
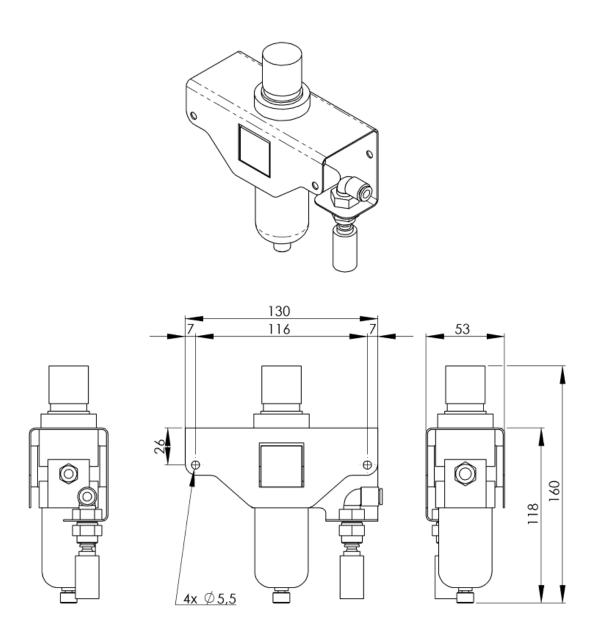
Moisture in water separation bowl of air service unit and exhaust discharge of the cylinder.
Moisture can accumulate in the water separation bowl and in the exhaust charge of the cylinder and can cause a possible hazard if coming into contact with live electrical circuits.
- Drain moisture from the water separation bowl at regular intervals
- Check exhaust charge of the cylinder for moisture and drain if necessary
- Position the air-service-unit so that there is no chance of this moisture coming in contact with live electrical circuits

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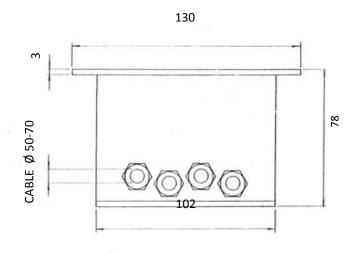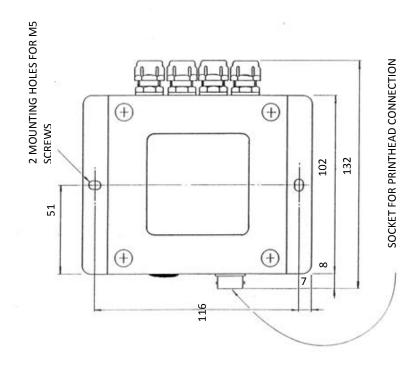
Layout Air Service Unit
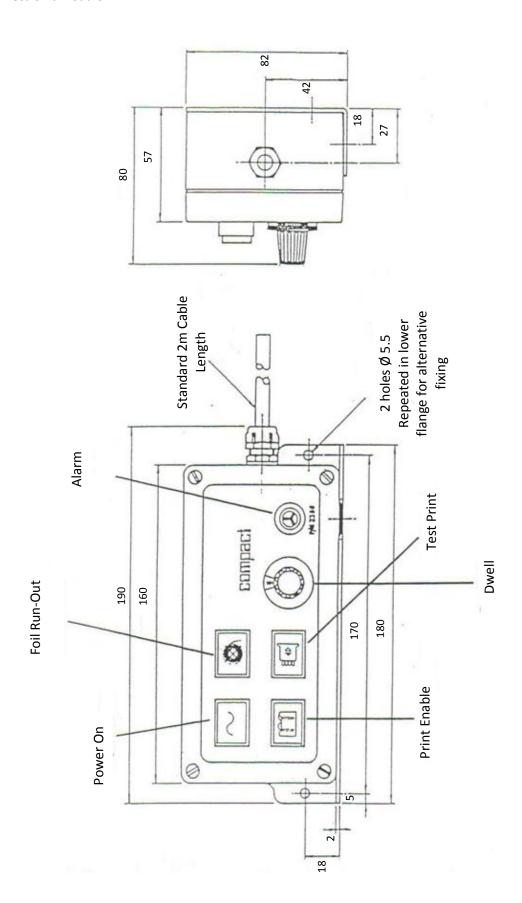
Mounting Instructions Power Pack Universal

Layout Power Pack Universal

Mounting Instructions Electronic Module

Layout Electronic Module

5   Startup

The Hot Foil coder is designed to provide a hot foil printing facility only when securely installed to a packaging or label-ing system.

The control and safety systems provided are necessary for the safe operation of the equipment. Any device removed or adjusted to facilitate maintenance must be replaced and/or readjusted before the unit is entered into service.

5.1   Typeholder – Setting Up

> ⚠ **WARNING**
>
> **Skin burns due to high temperature of type holder and heater block**
>
> The heater block and type holder operate at a temperature high enough to cause skin burns if touched.
>
> ▪ Take care to avoid direct contact when removing or inserting a type holder from the heater block.

The four main categories of typeholder are prepared in the following manner:

Fixed Row and Universal
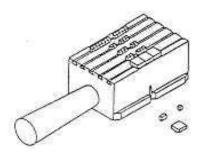
These typeholders accept cast type.

Clean the recess(es) to ensure that the type will be seated correctly.

Insert the type characters and spacers to create gaps, one piece at a time

Fit additional spacers as necessary to align the types and fill the recess(es)

T-Slot

These typeholders accept T-Slot type which is nor-mally engraved hardened steel.
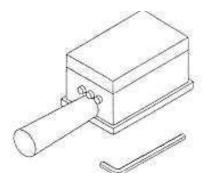
Clean the recess(es) to ensure that the type Will slide easily into the slots

Insert the type characters and spacers to Create gaps, one piece at a time

Insert the T-Slot type retaining clips or blocks into each end of the slots.

Zinco
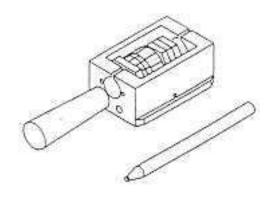
These typeholders accept 5mm thick etched zinc plate

Clean the mating surfaces to ensure that the plate will be seated properly

Use the countersunk screws to secure the plate. A hexagonal wrench is provided

Rotary Flick Wheel

These typeholders are supplied with rotary wheels carrying the type characters

Rotate the wheels to obtain the desired print. An indexing pencil is provided to push each wheel round to the correct position

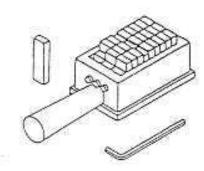## 5.2 Typeholder – Fitting and Removal

⚠️ **WARNING**

Skin burns due to high temperature of type holder and heater block

The heater block and type holder operate at a temperature high enough to cause skin burns if touched.

- Take care to avoid direct contact when removing or inserting a type holder from the heater block.

Pre-heating the typeholder off-line will reduce downtime since it will not have to be heated when installed in the heater block. Allen Coding GmbH can supply a pre-heater unit for this purpose.

Screw the extraction handle into the tapped hole provided in the type block and use this as a handle. Check that the type face is correctly orientated and slide the type block into the heater block.

Take care to avoid direct skin contact with the typeholder or the heater block.

To withdraw the typeholder, screw the extractor handle into the typeholder tapped hole and use this as a handle to slide the typeholder out. With normal care it is possible to extract the typeholder without needing to cool it down first.

5.3 Magazine Loading / Unloading Instructions

Depending on the coder model you have purchased the coder may be fitted with a foil fault sensor. An audible alarm will sound and the fault indicator will be illuminated when either the foil runs out at the end of a reel, if the foil breaks, or when a magazine loaded with foil is removed.

To cancel the audible alarm, press the alarm cancel button. The button will remain lit until a loaded magazine is replaced on the coder. The coder will not function until the foil is replaced.

> ℹ️ **NOTE**
>
> **Reduction of downtime**
> To reduce down time, it is recommended that a second, spare magazine is kept on standby. This can be pre-loaded with foil at a convenient time and rapidly exchanged for an empty magazine.

Release the magazine from the coder body by sliding the latch out of engagement with the central pillar.

By pulling on the two handles, remove the magazine directly away from the coder body.

Fit an empty cardboard core onto the take-up roller, this would normally be transferred from the now empty feed on spool.

Check the condition of the rubber foil drive roller, if necessary, clean off any dirt or duct.

Referring to the label on the magazine, push a new reel of foil; onto the feed on spool and thread the foil, using the path indicated, to the take up roller.

Secure the free end of the foil to the cardboard core on the take up roller using adhesive tape.

Rotate the foil drive roller to ensure that the foil is securely attached at the take up roller and to apply the correct initial tension to the foil.

> ℹ️ **NOTE**
>
> **Foil drive roller**
> The foil drive roller is fitted with a one-way clutch and can only rotate in one direction.

Replace the magazine and check that the foil enters cleanly into the slot provided at the rear of the coder. Guide pins ensure that the magazine is correctly aligned. If the foil is not guided cleanly, the sensor for foil run-out and foil fault will still inhibit operation.

5.4 Power on and Warm up

Normal Operation

In normal operation the unit will be powered up at some time before the start of the working shift to allow the correct temperature to be reached before operation is due to start.

> ⚠️ **WARNING**
>
> **Skin burns due to high temperature of type holder and heater block**
>
> The heater block and type holder operate at a temperature high enough to cause skin burns if touched.
>
> - Take care to avoid direct contact when removing or inserting a type holder from the heater block.

At the start of each shift, visually inspect the condition of the coder, coder mounting and wiring. If necessary, clean the unit and the surrounding area.

Rectify any apparent signs of damage or wear.

Following any maintenance or problems with the unit it is recommended that the following initial set-up procedure is followed in the sequence given:

5.5 Air Supply

Check that an air supply is connected to the air service unit, and that the pressure gauge is indicating an outlet pressure of 4bar (58psi). if necessary, lift the adjustment knob on the regulator and adjust, by turning, until the correct pressure is indicated. Press down on the regulator adjusting knob to lock the adjustment. Drain any moisture that may have accumlated in the bowl.

5.6 Power Supply

Enable the power supply to the power pack. The green LED's on the electronic module and the coder body will be illuminated to indicate that the 24v dc power supply is enabled. In addition, any alarm LED's will be illuminated on the electronic module.

6 Operating

6.1 Controls

When the coder has been enabled the LED's on the electronic module will be illuminated.

Before switching the coder on select the required temperature range as required. Normally the low range would be used but, for high speed or where printing a large area of print, the high temperature range would be used.

If any alarm condition exists the relevant LED will be illuminated and fault indicator will flash.

Allow approximately 12 minutes for the coder to reach the required temperature. The dwell can be set using the potentiometer on the electronic module.

6.2 Coder Mounting and Adjustment

If the coder has been set-up as described earlier under installation, or was last being used for the same printing task and has not been disturbed since, this procedure can be ignored.

If the coder mounting has been disturbed, or is being set-up for a new printing task then proceed as follows:

Release the four adjustment locking knobs and turn the knurled adjustment nuts by equal amounts to move the coder safely away from the print position. Turning the adjustment nuts by equal amounts will help to maintain the original alignment.

Adjust the coder printing position. Release the coder clamping handle by quarter of a turn and move the coder position by using the position adjustment knob to align the printhead with the required printing position. Re-tighten the coder clamping handle.

6.3   Typeholder

> ⚠️ **WARNING**
>
> **Skin burns due to high temperature of type holder and heater block**
>
> The heater block and type holder operate at a temperature high enough to cause skin burns if touched.
>
> ▪ Take care to avoid direct contact when removing or inserting a type holder from the heater block.

Check and / or set-up the required type holder.
Please confer section 5.1 – 5.2.

> ℹ️ **NOTE**
>
> **Quick change of type**
> It is suggested that a spare type holder is obtained. Type can be set using a cool type holder.

Using the extractor handle, load the typeholder to the heater block.

6.4   Magazine

If necessary, load foil onto the magazine.
Locate the magazine onto the coder and secure in place by using the latch.
Please confer section 5.3 *„Magazine Loading / Unloading Instructions"*

6.5   Foil Index

If the coder foil, index has been previously set up or was last being used for the required printing task and has not been disturbed since, this procedure can be ignored.

Adjust the foil index knob fully anti-clockwise to give the maximum foil index for each printing cycle.

For most efficient use, the foil index knob has to be adjusted while operating.
Please confer section 6.10 *„Foil Economy"*

6.6   Backing Pad

Check that the backing pad is in good condition and is aligned correctly with the print area.

> ℹ️ **NOTE**
>
> **Backing pad**
> A resilient backing pad should be used if printing onto a media which would otherwise have a rigid backing, for example, when printing to a label strip. This takes up any small inaccuracies in the type face, reduces the shock loading on the coder and gives greatly improved performance and longevity.
> A backing pad is not normally required when printing onto cartons.

6.7 Printing Pressure

Allow at least 5 minutes for the printhead and the heater block to stabilize at the set temperature.

Position the material to be printed over the backing pad, press the test button on the electronic module and examine the resulting print.

CAUTION

Coder damage

Damage will occur if the coder is set too close to the material surface.

- Take care not to set the coder too close to the material surface.

If the resulting print is too light, release the four adjustment locking knob and turn the knurled adjustment nuts by small increments to move the coder closer to the material being printed on. Turning the adjustments nuts by equal amounts will help to maintain the alignment of the coder with backing pad. Tighten the locking knobs after each adjustment.

NOTE

Uneven print
Moving the coder too far forward will affect the foil index. An uneven print might be corrected by moving the coder back on the side with the darker print.

Repeat this test print sequence, if necessary adjusting the nuts by different amounts, until an even print with a light impression is obtained. Tighten the locking knobs after each adjustment.

6.8 Printing Temperature

Switching between the temperature ranges is achieved by moving the toggle switch on the coder body between the marked high and low temperature positions.

The effect of the set temperature is variable and will depend on other factors such as print area, printing speed, dwell, time and the grade of foil being used. The transfer of pigment from the foil to the substrate depends on the temperature to which it is heated. For a given head temperature, the rate of the transfer of the heat to the pigment is reduced by a larger area of print, higher printing speed and shorter dwell time. The effect being aimed at is for the pigment to adhere completely and permanently to the surface being printed.

The following gives a guide to the temperature ranges to use, these apply when printing to paper, card or plastic film. Metallic foils will require a higher operating temperature:

Print	Speed	Heat Range
1 to 3 lines of up to 10pt type or an equivalent area	Up to 150 prints/min	Low
4 lines or more of 10 pt type or an equivalent area	Up to 150 prints/min	High

6.9 Dwell Adjustment

The dwell time is the short period of time for which the typeface is in contact with the item being printed during the print cycle. Dwell time is set using the potentiometer located on the electronic module.

Dwell time must be adjusted correctly to give a good quality print. The following reproduction gives an indication of the effects the dwell time has on the resulting print.

Dwell time too short   Dwell time correct   Dwell time too long

The setting to aim for is the minimum dwell time which produces a good print. A long dwell time will reduce the number of prints per minute which can be achieved. If the print does not adhere completely and permanently to the surface being printed, that is it can be rubbed off, try varying the heat and/or dwell settings. If a satisfactory print quality cannot be obtained it may be necessary to use a different grade of foil.
For further recommendations, refer to section 6.10 *"Foil Economy"*.
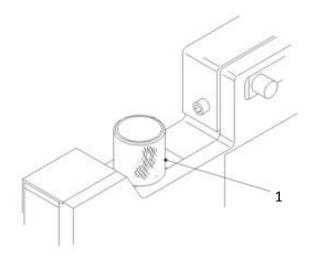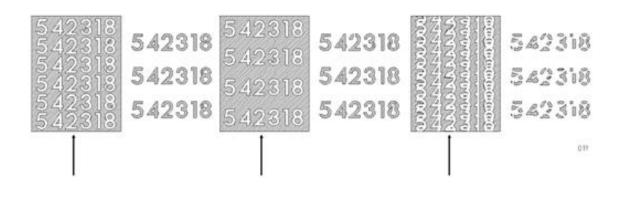
6.10 Foil Economy

Foil is indexed through the coder as the printhead returns after each print. The length of the foil indexed being adjusted using the foil index knob; the knob being turned clockwise to reduce the amount of foil movement.

Efficient use of the foil is indicated by the illustration below:

1	TURN FOIL INDEX KNOB CLOCKWISE TO REDUCE THE AMOUNT OF FOIL MOVEMENT.

FOIL INDEX CORRECT ECONOMIC FOIL USE	FOIL INDEX TOO LARGE RESULTS IN WASTAGE	FOIL INDEX TOO SMALL INCOMPLETE PRINT IS OBTAINED

The foil index knob can be adjusted whilst the coder is printing and the amount of foil index can be seen as the foil moves around the rubber drive roller.

6.11 Enable Printing

Once the coder unit set up procedure is complete normal operation becomes very simple. Once the unit has warmed up (approx 12 minutes), press the print enable button on the electronic module. This will become illuminated and operation continues automatically.

The operator should however check the print quality during production, if necessary increasing or decreasing the dwell time to correct for any variations in quality.

The operator is also required to respond to any audible alarms issued by the electronics module.

6.12 Alarms

Foil Run-out / Foil fault:

A sensor in the foil feed slot at the rear of the coder monitors. When the end of the reel is reached, or the foil breaks, the sensor sends a signal to the electronic module and an indicator lamp is illuminated and an audible alarm is sounded. The audible alarm can be cancelled by pressing the switch on the electronics module. The indicator lamp will be extinguished after reloading the magazine with foil and replacing it on the coder body.

6.13 Power Off

The coder unit will normally be wired to inhibit the action of the host machine on which it is mounted. If the coder runs out of foil or the foil breaks the coder will stop the product flow on the host machine thereby preventing uncoded product passing through the production line.

When product flow through the machine is stopped the coder will also be stopped, although it will still be powered up and the temperature maintained. The coder must therefore be switched off at shutdown, or the completion of the shift.

To shut down the coder unit, switch off the power supply at the external isolator switch.

⚠ **WARNING**
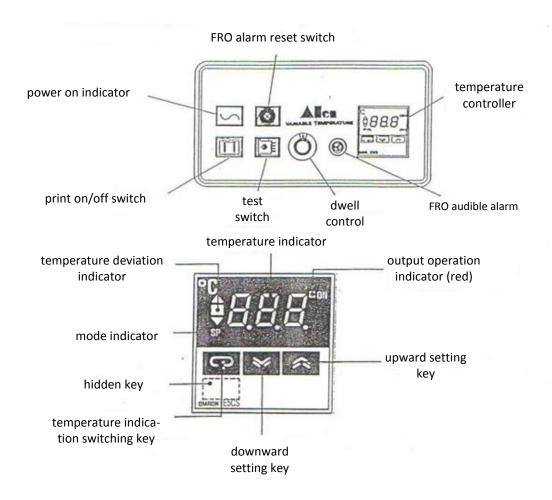
High temperature of print head and heater block
Air pressure of air service unit
When shut down, the print head and the heater block will still be at a temperature high enough to cause skin burns if touched. Air pressure will still be present until switched off at the air service unit or the main feed.

- Allow time for print head and heater block to cool before undertaking any maintenance or cleaning of the coder unit.
- When undertaking any maintenance or cleaning of the coder unit, please mind that air pressure will still be present at the air service unit.

6.14 Variable Temperature Module

Setting the temperature

As shown diagrammatically above, pressing the temperature indication switching key, causes the display of the present temperature (of the heater block) to change to the set point temperature (the mode indicator shows SP).

Holding the hidden key depressed and pressing the upward and downward setting key allows the set temperature to be changed.
Pressing the temperature indication switching key 3 times displays the present temperature again (if using mazak type, do not set the temperature above 200°C and do not exceed 250°C in any case as the thermocouple wire and heater block insulation may be damaged. On later models a maximum of 200°C has been set)

Control Indications

When the control module is first switched on, the temperature controller displays the present temperature, the red output operation indicator will light and the red "below temperature indicator" will be lit (showing the present temperature is below the set temperature).
When the temperature of the heater block is within 3°C of the SP temperature, the green "at set temperature indicator" will light.
If the temperature overshoots or the SP temperature is lowered, the red "above deviation indicator" will light up.

If the thermocouple fails (in the heater block) or the coder is disconnected from the control module while switched on, the temperature controller will show FFF or --- (flashing).

Temperature Alarm

To set this function the temperature indication switching key should be pressed until AL mode is displayed at the bottom of the display. A figure will be shown which is the tolerance, allowed on the temperature, within which the coder will operate. This figure can be changed by pressing the hidden key and either the upward or downward setting key, e.g. with SP set to 150 and AL set to 10, the coder will operate between 140° and 160°C.
Pressing the temperature indication switching key twice displays the present temperature again.

If the temperature of the coder goes below, or above the allowed temperature, the audible alarm will sound and the coder will stop working. The red FRO alarm reset switch will also be lit and the "AL" alarm indicator will show on the display. To stop the audible alarm, press the FRO alarm reset switch. The coder will not operate again until the temperature returns to within the tolerance.

7 Troubleshooting

The following Chapter is intended to help you understand fault messages, to identify their origin and to correct them.

7.1 Testing

Following maintenance, or of any problems are experienced during operation, the function of the coder can be checked using the test button on the electronic module. The test button, when pressed, operates the coder for one single print.

- If necessary, press the print enable button on the electronic module, the indicator light will be extinguished when the coder is off line.
- Check that the backing pad, if fitted and the print media are in position. Operating the coder without a resilient backing pad or print media will impose excessive loads on the coder unit and will increase wear and risk damage to the typeface.
- Press and release the test button. The coder will perform a single print cycle.
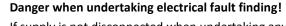
Repeat the single print cycle, checking and making adjustments as necessary

7.2 Electrical Fault Finding

⚠ **CAUTION**

Danger when undertaking electrical fault finding!

If supply is not disconnected when undertaking any maintenance, there may be danger for the personnel and damage may be caused to the system as well as to material values in the surroundings. .
- Ensure that electrical supplies are properly isolated before undertaking any maintenance procedure. The supply should be disconnected by pulling the mains plug.
- During activities and during your absence, secure the device so that no changes may be performed by other persons or situations.
- Electrical and mechanical fault finding must only be undertaken by persons suitably experienced and qualified.
- A notice should be placed at the point of isolation showing:
  DANGER – WORK IN PROGRESS
- All machine covers must be securely fastened and all control, interlock and safety systems re-instated before returning the unit to service.

Description	Meaning	Corrective measures
Electronic Module Lamps and Neon Indicator on Coder Fail to Illuminate	F4 fuse 1amp anti surge open circuit	Check F4 fuse 1amp inside power pack unit and replace, if necessary
Electronic Module working but Heaters not working on Coder, Neon on Coder not Illuminated	F2 or F3 fuse 1amp anti-surge open circuit	Check F2 or F3 fuse 1amp inside power pack unit and replace, if necessary
Electronic Module working and Neon on Coder Illuminated but Heaters not working	Heaters are open circuit, one of the supply leads to heater block open circuit	Check supply leads to the heater block and replace, if necessary
Electronic Module Lamps not working but Neon on Coder Illuminated	F1 fuse 250mA anti-surge open circuit	Check F1 fuse 250mA anti-surge inside power pack unit

7.3 Fault Finding Chart

Symptoms

Possible Causes

	No Pulse to Solenoid	No Air Pulse	Missing Codes	Coder Sluggish	Poor Printing	Foil Tracking	Inconsistent Tape Pull	Inconsistent Printing	Coder Neon Extinguished	Module Lamps Extinguished
Input Signal	*		*							
Fuses (note 1)	*								*	*
Timer PCB (note 1)	*									
Solenoid Valve		*	*	*	*					
Air Pipes				*	*					
Heaters					*					
Foil Drive Roller							*			
Take-up Roller							*			
Drive Spring							*			
Backing Pad					*					
Foil Threading						*				
Hot Foil Tape			*		*			*		
Type Characters					*					
Mounting Adjustment					*					
Magazine Damage						*				
High Dwell Time					*	*				
Low Dwell Time					*					
High Air Pressure					*					
Low Air Pressure		*		*	*		*			
Unit Worn Out		*		*	*		*	*		
Temperature Too High					*					
Temperature Too Low					*					

Note 1: Refer to electrical fault finding section

7.4 Wear and Tear

Condition	Likely Area Affected	Remedy
Damage from misuse	Heater Block	Clean up with file or replace
	Typeholder	
	Magazine	Adjust posts and check tracking
	Foil drive roller	Replace
	Heater block detents	
Incorrect lubricant or none	Cylinder	Replace seals and lubricant
Unit worn out	Printhead	Return to Allen Coding GmbH for repair

7.5 Foil Run-out / Foil Fault

The foil run-out sensor alarm is operated when the end of the foil is reached, the foil breaks or the magazine is removed.

7.6 Foil Run-out not working

To check the electronic module first remove the rear cover from the coder. Isolate the coder from the power pack by removing the 6 way connector. The FRO is situated behind the coder mounting plate and is connected to the printhead circuit PCB by three leads:

> **Green** - **ground**
> **Violet** - **12v dc supply**
> **Black** - **signal**

- Disconnect the black lead from the 3 way terminal block, reconnect the coder to the power pack. Using a piece of link wire or pointed pliers short circuit connections marked *Gn* and *Bk* on the 3 way terminal block. Remove short circuit. Now short circuit connections marked *V* and *Bk* and the 3 way terminal block, this will trigger the alarm.

- If the alarm is triggered the electronic module is working properly and the FRO component is faulty.

- If the alarm fails to trigger then repeat the exercise as described above and if the alarm still fails to trigger there is a fault with the electronic module. Replace the PCB within the electronic module.

Once it has been established that the electronic module is working reconnect the black lead into the 3 way terminal block. Using a length of printing foil, slide the foil into the foil slot at the rear of the coder behind the coder mounting plate with the reflective side of the foil facing the FRO unit. If the alarm fails to trigger on removal of the foil then reverse the foil so that the matt side is facing the FRO, then remove and if the alarm triggers this means that the FRO is getting a signal from the coder mounting plate. Possible causes for this are:

- Neoprene pad missing   -   *replace*

- Dust gathered on neoprene pad causing false reflections   -   *clean / replace*

If the alarm still fails to trigger replace the FRO unit. If this unit is replaced it should be fitted with a neoprene pad mounted on the underside of the PCB to ensure that the FRO fits firmly into the coder and does not work loose.

7.7 Solenoid

Operation of the air solenoid can be checked at any time using the test button as described above. Note that the speed of operation of the cylinder is determined by the air flow restrictors drilled into the manifolds and is not variable.

7.8 Solenoid valve not working (alarm OK)

Check that the test button on the electronic module is working, if OK then possible cause:
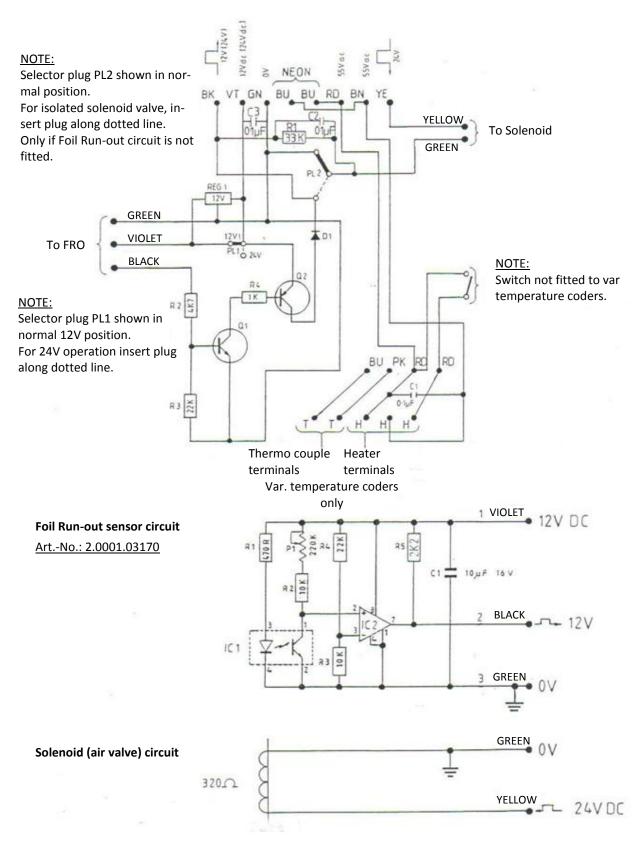
- Signal missing from the conveyor to electronic module
- If signal from conveyor is OK then the OPTO ISOLATOR IC5 is probably faulty.

Replace the PCB in the electronic module.
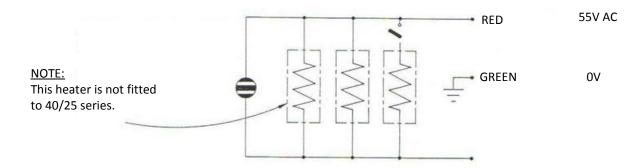
7.9 Compact Printhead Electronic Circuit

Printhead Circuit Art.-No.:0.0000.07077

NOTE:
Selector plug PL2 shown in normal position.
For isolated solenoid valve, insert plug along dotted line.
Only if Foil Run-out circuit is not fitted.

To Solenoid

To FRO {
GREEN
VIOLET
BLACK

NOTE:
Switch not fitted to var temperature coders.

NOTE:
Selector plug PL1 shown in normal 12V position.
For 24V operation insert plug along dotted line.

Thermo couple terminals   Heater terminals
Var. temperature coders only

Foil Run-out sensor circuit
Art.-No.: 2.0001.03170

1 VIOLET — 12V DC
2 BLACK — 12V
3 GREEN — 0V

Solenoid (air valve) circuit

320 Ω

GREEN — 0V
YELLOW — 24V DC

Compact Printhead Heater Details

NOTE:
This heater is not fitted
to 40/25 series.

RED   55V AC

GREEN   0V

8 Cleaning and Maintenance

⚠ CAUTION

Hazards during cleaning and maintenance activities!

Switch off the device during cleaning and maintenance work, otherwise personnel safety may be at risk and damage to the device or other nearby property may result.

- Always deactivate the power supply to the device during cleaning and maintenance activities. Pull the mains plug.
  BROWN   55V AC
- During activities and during your absence, secure the device so that no changes may be performed by other persons or situations.
- Maintenance and cleaning work may only be performed by trained personnel
- A notice should be placed at the point of isolation showing:
  DANGER – WORK IN PROGRESS
- All machine covers must be securely fastened and all control, interlock and safety systems re-instated before returning the unit to service.

8.1 Cleaning

ATTENTION

Damage to the device due to improper cleaning

Use of improper cleaning methods and the use of incorrect cleaning agents may result in damage to electronic and mechanical components of the device.

- Disconnect the device from the power supply before you begin the cleaning.
- Follow the cleaning instructions described in the operating manual.
- Only use cleaning agents specified by the manufacturer.

Overview of cleaning activities:

Cleaning interval	Cleaning agent	Activity
Every shift	----------------------------------	Clean types with a quill brush
Every shift	Cleaning towels Art. No.: 1.0000.45008 Rubber roller cleaner Art. No.: 1.0000.45007	Clean Printer and magazine from foil particles

8.2   Maintenance

Regular inspection and maintenance intervals are necessary to detect any occurring damage and wear in a timely manner.

The Allen Compact 40/25 Coder has been designed to operate efficiently with the minimum of maintenance attention, however the following schedule is recommended to ensure maximum reliability:

⚠️ **WARNING**

Skin burns due to high temperature of type holder and heater block

The heater block and type holder operate at a temperature high enough to cause skin burns if touched.

- Take care to avoid direct contact when removing or inserting a type holder from the heater block.

Overview of maintenance activities:

Maintenance interval	Unit	Activity
Daily	Coder and associated components	Visually inspect the coder and associated components for security, vibration, wear and damage. Report any problems to the person responsible for maintenance
Daily		During operation regularly check the print quality and efficient use of the foil making adjustments as necessary. Respond to audible and visual alarms as they occur.
Daily	Backing pad	Check the position and condition of the backing pad, adjust the position or replace as necessary.
Daily	Magazine Rubber drive roller	When loading foil, wipe the magazine clean of any dust or debris, paying particular attention to the rubber drive roller.
Weekly	Coder Control unit Power supply, Air service unit External wiring Mountings	Visually check the coder, control unit, power supply, air service unit, external wiring and all mountings. Check for security, vibration, wear and damage rectifying any problems that may be found.
Weekly	Air service unit	Drain by pressing the manual drain valve in the bottom of the bowl. The frequency of draining the air service unit will depend on the quality of the air supply.
Monthly		A full maintenance inspection should be carried out by a suitably qualified and experienced maintenance technician.
Monthly		Check internal connections and fasteners, particularly within the coder. Correct any faults found.
Monthly		Check the operation of the relays and alarm sensors, making adjustments as necessary.

Lubrication

No specific lubrication is required.

9 Maintenance

9.1 Spare parts

Refer to the Spare Parts List under "*Spare parts*" in the Appendix.

9.2 Service address

Allen Coding GmbH
Service Department
Friedrich-Bergius-Ring 30
D 97076 Würzburg
Germany

Direct: +49 931 250 76 911
Fax: +49 931 250 76 50
Email: support@allen.de

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i **NOTE**

Important information in case of defects
In case of defects in equipment, please provide the following information:
- Serial number
- Equipment type
- Description of fault
- Software- / Firmware-version
- Any affected components/assemblies

---

10 Transport and storage

10.1 Transport

⚠ **WARNUNG**

Hazard due to improper securing of load

Improper securing of the device during transport can result in unpredictable hazards to persons and/or property damage.

- Secure the device in accordance with instructions.
- Note also the weight information on the device provided in the Operating Manual.
- Have the device transported by a company skilled in the process.

10.2 Storage

Store the device only under the stated, permissible ambient conditions of temperature and humidity. Relevant information is found in this operating manual under "*Ambient conditions*". Protect the device against dust and dirt.

11 Disposal

The device consists of various materials which can be recycled and which have to be disposed of separately.

In the event of disposal of the device, follow the relevant legal guidelines. Since the disposal guidelines may differ from country to country, please consult with your supplier as necessary.

Notes to disposal:

- Material types should be disposed of separately. The objective should always be an environmentally compatible disposal which ensures maximum recycling of materials.
- Observe the material and disposal instructions that may be present on certain individual parts.
- Make use of the opportunity to return materials to the manufacturer or supplier.

Appendix

EC-Compliance Statement

EC-Declaration of Conformity
Printer Compact 40/25

Allen

EC-Declaration of Conformity
according to EC machinery directive 2006/42/EC, Annex II A
(Translation of the EC Declaration of Conformity)

Hereby we declare that the machine named in the following adheres to the basic safety and health requirements of the EC guideline 2006/42/EC in regards to its concept, design and version that is marketed by us. Changes that have not been coordinated with us will invalidate this declaration.

Manufacturer

Allen Coding GmbH	Direct: +49 931 250 76-0
Friedrich-Bergius-Ring 30	Fax: +49 931 250 76-50
D-97076 Würzburg	E-Mail: info@allen.de
	Website: www.allen.de

Machine description

Function:	Hot Foil Printing System Allen Compact 40/25
Type/Model:	Allen Compact 40/25
Serial number:	4025C1xxxxxxx
Year of construction:	2013

The conformity with addition guidelines/regulations that apply to the machine is declared

2004/108/EC (EC-EMC-Directive);
The guideline 2006/95/EC was adhered to in regards to its protection objectives;
(s. Annex, No. 1.5.1 of guideline 2006/42/EC)

The conformity of the named machine with the rules of the EC guidelines named above is proved by conformity with the following standards:

Applied harmonized standards: **Additional applied standards:**

EN ISO 12100:2010;
EN 60204-1:2006 + A1:2009;
EN ISO 13857:2008; EN 349:1993 + A1:2008;
EN ISO 13732-1:2008;
EN61000-6-2:2005; EN61000-6-4:2007
EN61000-3-2:2006; EN61000-3-3:2008

Authorized person for the technical documentation

Dirk Beseke, Friedrich-Bergius-Ring 30 / D-97076 Würzburg
(Name, Address)

Details of signatory person

Kurt Schwarz	Engineering Manager	Karin Putz	QM-Representative
(Name of signer)	(Position)	(Name of signer)	(Position)

Signature   Signature

Würzburg, 18.01.2013   Würzburg, 18.01.2013
(Place, Date)   (Place, Date)

Allen Coding GmbH	Tel. +49 931 250 76-0	info@allen.de	Page 1 / 1
Friedrich-Bergius-Ring 30	Fax +49 931 250 76-50	www.allen.de	Version: V1.00
D-97076 Würzburg			Stand: 18.Jan 2013

Spare parts

This Section provides an illustrated parts list for the Allen Compact 40/25 Coder.

For each of the major units, details are provided in the form of a list, providing part numbers for recommended spares, description and total quantity used per assembly. This list is referenced, by item numbers, to the accompanying illustration.

Orders for replacement parts should include the coder model type name and serial number, the required part number, description and quantity.

For accessories, type holder, types and hot printing foil, please contact the local distributor of Allen Coding GmbH.
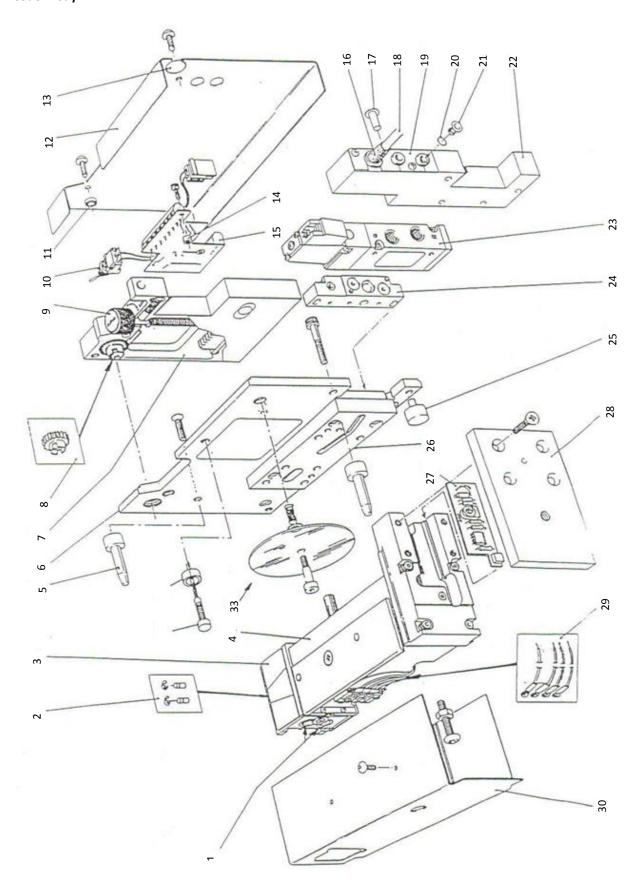
Orders for type holders should additionally include a drawing or a description of the desired layout and the type in use.

Common Parts

| Article number	Description
1.0053.40000	Backing Pad 76 x 225 x 2 mm, steel - blue
1.0068.40000	Backing Pad U-shape 76 x 110 x 2 mm, steel – blue
3.M041.40000	Magnetic Backing Pad 74 x 290
0.0000.02271	Spring Drive Belt
0.0000.02268	Tension Spring
1.0000.02480	Heater Set
0.0000.05947	Rubber Roller Tape Drive
0.0000.02657	Heater Block Detent Set
0.0000.K0671	Gasket and Seal Set
4.0000.07014	Fuse Set Power Pack
3.0000.02478	Switch Bulb 28v

Coder Body
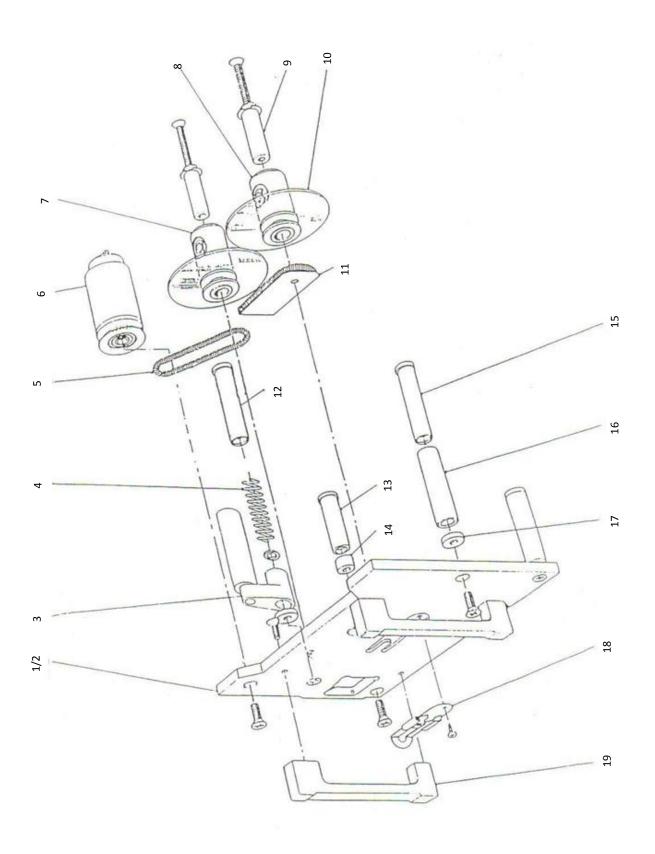
Coder Body Parts List

No.	Article number	Description	Count
1	1.0000.02480	Heater Set Compact 205	1
2	0.0000.02657	Heater Block Detent Set (Pair)	1
3	0.0000.07393	Heater Block Assembly	1
4	0.0001.03492	Cylinder and Heater Block Assy	1
5	0.0000.02248	Stub Magazine Location	2
6	0.0000.02182	Main Plate Fab'n	1
7	0.0000.02837	Tape Index Mech. Sub Assy. 40/25	1
8	3.0000.02835	Gear Tape Drive Fab'n	1
9	0.0000.02191	Knob Tape Index Adj.	1
10	0.0000.07168	Switch Heater Control	1
11	0.0000.02213	Washer Rear Cover Spacer	2
12	0.0000.02212	Back Cover	1
13	0.0000.02493	Grommet 3/8" Blind	1
14	0.0000.02308	Washer Coder PCB Spacer	2
15	0.0000.07077	PCB Printhead Compact	1
16	0.0000.02216	Grommet 3/8 Sleeved	1
17	0.0000.02250	Air Fitting Plug 5mm	2
18	0.0000.06989*	Lead Fab'n Compact Coder	1
19	0.0000.02215	Strip Cable Retaining	1
20	0.0000.01652	O'Ring 5mm Push in Air Fitting	4
21	0.0000.03506	Collett 5mm Air Fitting	4
22	0.0000.02836	Block Rear Manifold Fab'n	1
23	0.0000.02208	Solenoid Valve Compact	1
24	0.0000.04067	Block Valve Manifold 40/25	1
25	0.0000.02249	Stub Spacer Pad	2
26	0.0000.02217	Plate Cylinder Packing	1
27	2.0001.03170	PCB FRO Sensor (On Centre)	1
28	0.0000.02225	Coder Mounting Plate	1
	0.0000.03405	Strip Non Reflective	1
29	0.0000.03496	Flexible Wire Set	1
30	0.0000.02244	Heater Guard	1
31	0.0000.04678	Neon Indicator Coder	1
32	0.0000.02247	Bezel Neon Indicator	1
33	100301	Shoulder Screw 6 – M5 – 16	1
	0.0000.02839	Guide Washer	1
	100028	Washer 6	1
	0.0000.02245	Disc	1
	0.0000.00102	Compression Spring	1

Magazine 122m
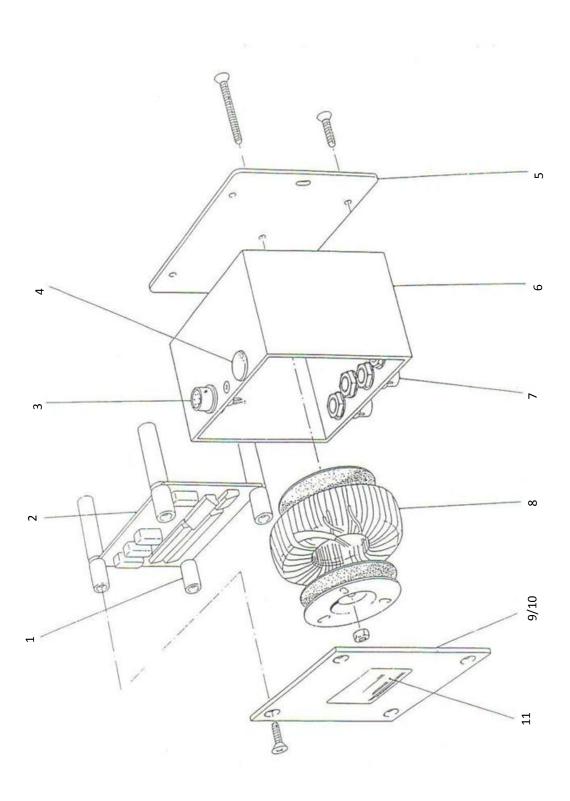
Magazine 122m Parts List

No.	Article number	Description	Count
1	0.0000.02252	Plate Magazine 205	1
2	0.0000.02254	Nameplate Tape Threading	1
3	0.0000.03818	Arm Assembly	1
4	0.0000.03816	Spring Nip Roller Compress	1
5	0.0000.02217	Spring Drive Band	1
6	0.0000.05947	Rubber Roller Tape Drive 40	1
7	0.0000.02269	Roller Take Up	1
8	0.0000.02265	Roller Feed On	1
9	0.0000.02270	Stub Tape Roller	2
10	0.0000.02272	Disc Tape Drive	2
11	0.0000.02268	Tension Spring Assembly	1
12	0.0000.02256	Stub Magazine Roller	3
13	0.0000.03472	Stub Mag. Tape Guide 38	1
14	0.0000.03473	Sleeve Mag. Tape Guide 38	1
15		Stub Magazine Roller (identical with pos. 12)	
16	0.0000.02257	Sleeve Mag. Stub Roller	2
17	0.0000.02255	Washer Mag. Stub Spacer	3
18	0.0000.M1767	Magazine Latch	1
19	0.0000.08697	Handle	2

Power Pack
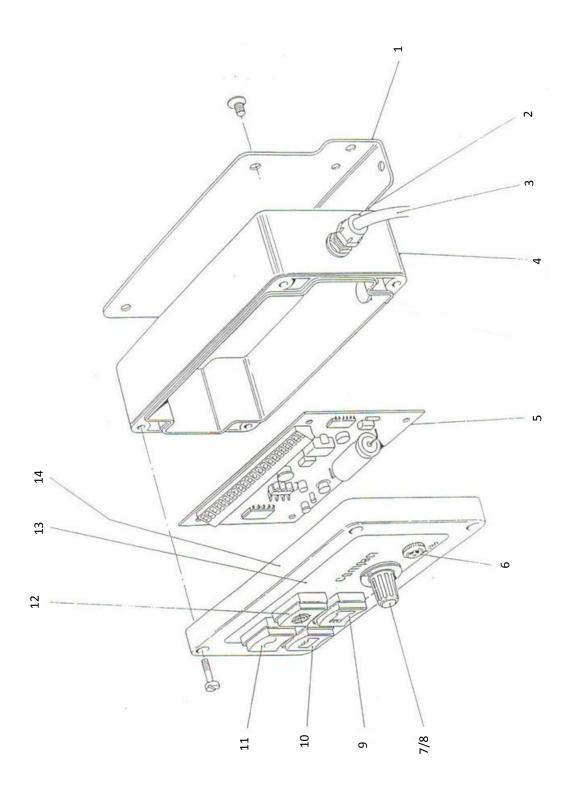
Power Pack Parts List

No.	Article number	Description	Count
1	0.0000.06899	Stub Power Pack	4
2	0.0000.06890	PCB Power Pack	1
3	0.0000.03542	Socket Fab'n 6 Way	1
4	0.0000.02509	Grommet ½" Blind	1
5	0.0000.02311	Plate Power Pack Base	1
6	0.0000.06898	Tube Power Pack Square	1
7	0.0000.02349	Cable Gland	4
8	0.0000.06836	Transformer 55-0-55, 0-20	1
9	0.0000.02314	Plate Power Pack Cover	1
10	0.0000.02318	Label Power Wiring Instructions	1
11	0.0000.06901	Nameplate Compact Power Pack	1

Electronic Module

Electronic Module Parts List

No.	Article number	Description	Count
1	0.0000.02303	L'Piece Module Mounting	1
2	100354	Cable Gland	1
3	0.0000.02707	Cable Electronic module	1
4	0.0000.09993	Box Electronic Module	1
5	0.0000.00870	PCB Timer / Foil Run Out	1
6	0.0000.03912	Audible Alarm	1
7	0.0000.05927	Potentiometer 2300 Module	1
8	0.0000.02304 0.0000.02306 0.0000.02307	Knob Number Dial Cap	1
9	0.0000.03730	Switch Test	1
10	0.0000.03729	Switch Print On/Off	1
11	0.0000.03728	Indicator Power Supply	1
12	0.0000.03731	Switch Foil Run Out Reset	1
	3.0000.02478	Switch Bulb 28v	4
13		Identical with position 4	
14		Identical with position 4	